AGREEMENT

between the

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

and

AMERICAN TECHNOLOGY INITIATIVE FOR AEROSPACE RESEARCH, TECHNOLOGY TRANSFER AND COMMERCIALIZATION, INC.

for

IMPLEMENTATION OF A JOINT SPONSORED RESEARCH PROGRAM

PREAMBLE

WHEREAS, Section 203(c)(5) and (6) of the National Aeronautics and Space Act of 1958, as amended, confer upon the Administrator the authority to negotiate, execute, amend, and terminate certain Space Act agreements, defined as Joint Sponsored Research Agreements; and

WHEREAS, NASA has established a Joint Sponsored Research Program, expanding the scope of NASA's current activities, on an experimental basis, to: 1) foster the synergistic collaboration of NASA and the private sector in joint sponsored research in order to achieve R&D efficiencies through leveraging of NASA's R&D resources in aeronautical and space science and technology and their applications; and 2) accelerate technology transfer and commercialization; and

WHEREAS, the Administrator has delegated his authority to negotiate, execute, amend, and terminate Joint Sponsored Research Agreements, by which NASA may provide resources, including funds, services, equipment, information, intellectual property, or facilities on a shared or pooled basis to one or more private sector participants in order to contribute to or participate in a mission-related joint sponsored research project for the purpose of advancing mission goals and transferring resulting technology to the private sector; and

WHEREAS, American Technology Initiative for Aerospace Research, Technology Transfer and Commercialization, a nonprofit public interest corporation, has over three years of research experience, examining the legal, financial, business and public policy issues arising from government and private sector collaborative research, and has developed case studies and prototype Joint Sponsored Research Projects to test the feasibility of collaboration by the government and private sector on research projects and the public management of those projects, and desires to continue testing the feasibility of its research by facilitating and implementing Joint Sponsored Research Projects between NASA and the private sector; and

WHEREAS, the Joint Sponsored Research Program established in this Agreement will be implemented and managed by American Technology Initiative and NASA through a Program Advisory Group to achieve NASA program goals, to assure fair opportunity to all entities desiring to participate in Joint Sponsored Research Projects, and to ensure the broadest possible utilization of NASA-developed technology by the U.S. private sector; and

WHEREAS, the principal purpose of Joint Sponsored Research Agreements shall not be for the acquisition of supplies or services by or for the use of the federal government;

NOW THEREFORE, the National Aeronautics and Space Administration, by virtue of Sections 203(c)(5)&(6) of the National Aeronautics and Space Act of 1958, as amended, and NMI 1050.9, and American Technology Initiative for

Aerospace Research, Technology Transfer and Commercialization, by virtue of its public interest charter, agree as follows:

1.0 DEFINITIONS

1.01 NASA means the National Aeronautics and Space Administration, Washington, D.C. 20546, acting by and through all NASA Centers and field installations.

1.02 AMERICAN TECHNOLOGY INITIATIVE FOR AEROSPACE RESEARCH, TECHNOLOGY TRANSFER AND COMMERCIALIZATION (hereinafter AmTech), means a California Nonprofit Corporation, having a principal place of business at 535 Middlefield Road, Suite 180, Menlo Park, California 94025.

1.03 JOINT SPONSORED TECHNOLOGY COMMERCIALIZATION FACILITATOR (hereinafter Commercialization Facilitator) means a nonprofit, private sector entity designated by NASA to encourage joint collaborative research efforts and technology commercialization through the facilitation of JSR Projects. The Commercialization Facilitator shall also be a Participant in the JSR Project. In this Agreement, AmTech shall be designated as the Commercialization Facilitator.

1.04 JOINT SPONSORED RESEARCH PROGRAM (hereinafter JSR Program) means a NASA program to sponsor and conduct research on public and private sector collaboration, and to create Joint Sponsored Research Projects designed to foster: 1) the synergistic collaboration of NASA and the private sector in joint sponsored research in order to achieve research and development (R&D) efficiencies through leveraging of NASA's R&D resources; and 2) accelerated technology transfer and commercialization.

1.05 JOINT SPONSORED RESEARCH PROJECT (hereinafter JSR Project) means an undertaking between NASA and one or more non-NASA participants in which NASA may provide resources, including funds, services, equipment, information, intellectual property, or facilities on a shared or pooled basis to at least one of the participants in order to contribute to or participate in a mission-related joint sponsored research project for the purpose of advancing mission goals and transferring the resulting technology to the private sector.

1.06 JOINT SPONSORED RESEARCH AGREEMENT (hereinafter JSR Agreement) means the legal instrument, or instruments, describing the rights, duties and obligations of NASA, the Commercialization Facilitator, and the Participant(s) in a JSR Project.

1.07 PARTICIPANT means a U.S. for-profit entity and/or a U.S. educational or research institution committed to joint sponsored research with NASA.

1.08 GOVERNMENT COLLABORATOR in a JSR Project means a government agency or unit, other than NASA.

2.0 PURPOSE OF AGREEMENT

2.01 The purpose of this Agreement is to enable AmTech to:

(a) Advance NASA's mission oriented R&D in aeronautical and space sciences and technologies and their applications;

(b) Facilitate the formation and implementation of JSR Projects, thereby enhancing U.S. economic competitiveness by early and accelerated transfer and commercialization of technology developed through the collaboration of the public and private sectors; and

(c) Implement and improve the JSR Program through continuing research and experimentation.

2.02 The terms of this Agreement will apply to AmTech's JSR Program activities and do not apply to any other activities NASA and AmTech may jointly undertake, nor to any JSR Program activities NASA may independently undertake, nor to any activities AmTech may undertake on its own behalf, or jointly with any other federal agency or private sector entity or individual, outside the scope of this JSR Program.

3.0 JSR PROGRAM MANAGEMENT PRINCIPLES

3.01 COST PRINCIPLES FOR NONPROFIT ORGANIZATIONS

AmTech will implement this JSR Program in accordance with its public interest charter and in compliance with the principles applicable to nonprofit organizations, set forth in OMB Circulars No. A-110 and No. A-122.

3.02 CONFLICTS OF INTEREST

AmTech shall develop implementing procedures that seek to avoid employee and organizational conflicts of interest, or the appearance of conflicts of interest, in the conduct of its JSR Program operations. In order to maintain neutrality and fairness in its implementation of the JSR Program, AmTech will not enter into separate arrangements with JSR Project Participants during the course of the JSR Project solely to benefit AmTech.

3.03 JSR PROGRAM OVERSIGHT

NASA will designate officials from NASA Headquarters and the NASA Ames Research Center to form a JSR Program Advisory Group to monitor and facilitate AmTech's JSR Program implementation. AmTech shall designate one or more points of contact for implementing this Agreement.

4.0 NASA'S RESPONSIBILITIES

4.01 To successfully carry out the JSR Program and test the efficacy of the JSR Agreement as a NASA tool for collaborative R&D and technology transfer, NASA may use the authority in Section 203(c)(5) of the National Aeronautics and Space Act of 1958, as appropriate, to commit funds and other resources to JSR Project Participants. When utilizing this authority, however, NASA funds shall only be committed to the educational or nonprofit research Participant in the JSR Project.

4.02 In the performance of its responsibilities, NASA agrees to

(a) Announce this JSR Program at centers, field installations, and in forums and publications, and actively encourage the formation of JSR Projects;

(b) Designate representatives from NASA Headquarters, Centers, and appropriate field installations to be responsible for recommending specific candidate JSR Projects on a timely basis;

(c) Use all reasonable efforts to approve or disapprove proposed or revised JSR Agreements within sixty (60) days of their submission by AmTech; and

(d) Designate the NASA officials identified in Paragraph 3.03 to provide assistance to AmTech in its implementation of the JSR Program and facilitation of specific JSR Projects with NASA.

4.03 NASA desires that this JSR Program be fully implemented during the term of this Agreement and become an established and leading program in public and private sector collaboration. To this end, in order to support AmTech's implementation of this JSR Program:

(a) NASA, through equal contributions from the Office of Commercial Programs and the Office of Aeronautics and Space Technology, intends to provide AmTech with direct support, through a grant or cooperative agreement for the term of this agreement. The funds provided are to be used by AmTech to conduct research on public and private sector collaboration, to assist NASA in the design and implementation of the JSR Program, and to provide facilitation to create JSR Projects designed to achieve JSR Program goals and objectives. The level of funding provided or planned for by NASA under the grant or cooperative agreement referenced above is based on the continued assignment by NASA of a senior federal employee to AmTech under an Intergovernmental Personnel Act (IPA) Agreement. If an appropriate IPA-assigned employee is not provided by NASA to support AmTech, then NASA shall endeavor to make a reasonable adjustment to its level of funding to AmTech to support a replacement employee or employees, if such funds are available; and

(b) To allow for the cost of growth and expansion of this JSR Program and to provide for a financially self-supporting JSR Program operation, NASA will provide indirect support to AmTech through an indirect cost rate on R&D funds committed to JSR Projects, to be used for AmTech's research and facilitation costs for the duration of the JSR Project. This indirect cost rate initially will be ten percent (10%) and may be adjusted by agreement between NASA and AmTech. AmTech will use its best efforts to negotiate matching indirect cost rates with the Participants in JSR Projects.

(c) NASA's direct and indirect program support provided under Paragraphs 4.03(a)&(b) may be used for all allowable costs incurred by AmTech for implementation of this JSR Program in accordance with OMB Circular No. A-122 and the NASA Grant and Cooperative Handbook (NHB 5800.1B), as amended.

4.04 NASA may provide to AmTech the expertise of qualified federal employees through assignment under the Intergovernmental Personnel Act or other federal authorities, if the granting of specialized expertise of one or more federal employees is of mutual benefit to NASA and AmTech.

5.0 AMTECH'S RESPONSIBILITIES

5.01 AmTech will facilitate JSR Project formation and implementation. This includes, *inter alia:*

(a) Identifying possible JSR Projects by working with NASA to determine collaborative opportunities, responding to project opportunities from NASA and non-NASA sources, and suggesting JSR Projects to NASA;

(b) Identifying possible Participants by utilizing criteria designed to promote fair access to a JSR Project and to bring together the best qualified Participants;

(c) Assisting the Participants in the development of a joint R&D plan, and seeking to maximize the leverage obtainable from public and private collaboration;

(d) Providing, within the principles contained in Section 7.0 herein, pertinent information to facilitate the sharing or pooling of equitable resources; and

(e) Evaluating a Participant's technology commercialization commitment.

5.02 In its implementation of this JSR Program, AmTech agrees to

(a) Prepare procedures and take all reasonable measures, within limitations of the program support provided by NASA, to ensure widespread notice of the availability of NASA technologies suitable for JSR Projects and of opportunities to participate in JSR Projects;

(b) Use its research findings to advise NASA of innovative methods within this JSR Program for achieving collaboration with the private sector; and

(c) Disseminate, to the widest extent practicable and where appropriate, the results of its research on the implementation of this JSR Program.

5.03 AmTech generally shall be a signatory to JSR Agreements, and will provide ongoing facilitation and research for Participants including, *inter alia:*

(a) Tracking and reporting R&D progress, invention disclosures, and commercialization plans and facilitating the transfer and commercialization of the subject technology;

(b) Guiding Participants, when requested, in the process of revising R&D objectives, milestones, or deliverables throughout the course of the JSR Project, and facilitating continued dialogue between and among Participants and the Government Collaborator(s), if any, in JSR Projects;

(c) Strengthening and expanding membership commitments in multi-Participant JSR Projects; and

(d) Facilitating R&D funds transfers from the for-profit Participant to the designated educational or nonprofit research Participant.

5.04 AmTech will maintain its certification by the Office of Personnel Management enabling it to host federal employees who may be assigned to AmTech by NASA, if mutually beneficial, under the Intergovernmental Personnel Act or other federal authority.

6.0 RESPONSIBILITIES OF PARTICIPANTS IN JOINT SPONSORED RESEARCH PROJECTS

The respective responsibilities of Participants in JSR Projects will be established in specific JSR Agreements. However, all such JSR Agreements will be based on the following funding and resource contribution principles:

(a) One or more Participants must commit funds to a JSR Project. At a minimum, the total of all funds committed must be in reasonable proportion to funds committed by NASA to support R&D. Funds from the for-profit Participant normally will be collected by AmTech, and AmTech will disburse those funds, as directed by the JSR Agreement, to the educational or nonprofit research Participant; and

(b) One or more Participants may commit in-kind resources, including manpower, facilities, equipment, technology, and rights to intellectual property to a JSR Project.

7.0 AGREEMENT ON THE BASIS FOR ALLOCATION OF RIGHTS TO INTELLECTUAL PROPERTY

In allocating rights to intellectual property in JSR Agreements, NASA seeks to further the objectives of the JSR Program by providing incentives for Participants to jointly and equitably support the performance of R&D with NASA and to promote the commercialization of resulting technologies. NASA considers its objectives furthered if NASA obtains only those rights to use technology as may be required by applicable law and regulations, or as may be agreed to in consideration of a JSR Agreement, with other rights residing with a Participant who intends to commercialize the resulting technology. NASA also considers its objectives furthered if NASA makes available rights to NASA technology, in the form of exclusive or nonexclusive licenses, to a Participant who requires such rights to commercialize technology resulting from a JSR Agreement. A summary of the principles by which intellectual property rights are to be allocated is set forth in Attachment A to this Agreement. These principles are in accord with and follow NASA's policies as enunciated in various policy statements and the National Aeronautics and Space Act of 1958, as amended. AmTech agrees that these principles and the implementing provisions of Attachment A will be included in JSR Agreements.

8.0 TERM OF AGREEMENT

8.01 The term of this Agreement shall be for a period of two (2) years. However, either party may terminate this Agreement prior to its expiration by giving written notice to the other party. The parties will use their best efforts to give written notice at least six (6) months prior to the desired termination date.

8.02 If NASA terminates this Agreement, it shall pay reasonable settlement costs incurred by AmTech in its role as a Commercialization Facilitator pursuant to each of the JSR Agreements then in place at the time of termination of this Agreement.

9.0 LIABILITY OF PARTIES

9.01 Neither party shall be responsible for the other party's liabilities arising from the performance of this Agreement. However, where appropriate, JSR Agreements will contain provisions regarding the allocation of specific risks.

9.02 Each JSR Agreement will contain language stating that each Participant and Government Collaborator in a JSR Agreement is responsible for its own performance. AmTech shall not be liable to NASA for the nonperformance of any Participant or Government Collaborator in a JSR Project or the inability of any such Participant or Government Collaborator to provide funding or other resources as required by the terms of any JSR Agreement.

10.0 ADDITIONAL TERMS

10.01 Both parties agree to use all reasonable efforts in the performance of this Agreement.

10.02 No portion of this Agreement nor any interest arising under it shall be assigned by either party without the written consent of the official authorized to bind the other party.

10.03 Any personnel assigned hereunder by AmTech to NASA shall comply with all prescribed security and safety regulations at NASA, but shall retain their employment status with AmTech for all purposes, including but not limited to salaries, fringe benefits, leave, insurance, workers' compensation, and seniority.

10.04 NASA's performance of this Agreement is subject to the availability of NASA's appropriations and nothing in this Agreement commits the United States Congress to appropriate funds therefor.

10.05 No member or delegate to the United States Congress, or resident commissioner will be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom, but this provision will not be construed to extend to this Agreement if made with a corporation for its general benefit.

11.0 ACCEPTANCE AND EFFECTIVE DATE

This Agreement is effective when each party's designated representative has signed below.

Richard Peterseh Date: June 15, 1992
Richard Peterseh
ASSOCIATE ADMINISTRATOR FOR AERONAUTICS AND SPACE TECHNOLOGY
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

John G. Mannix Date: June 9, 1992
John G. Mannix
ASSISTANT ADMINISTRATOR FOR COMMERCIAL PROGRAMS
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

R. G. Johnson Date: June 9, 1992
Richard G. Johnson
CHAIRMAN
AMERICAN TECHNOLOGY INITIATIVE FOR AEROSPACE RESEARCH, TECHNOLOGY TRANSFER AND COMMERCIALIZATION, INC.

ATTACHMENT A

AGREEMENT ON THE BASIS FOR ALLOCATION OF RIGHTS TO INTELLECTUAL PROPERTY

1.01 With respect to inventions and patents resulting from, or which may be introduced into, a JSR Agreement the following shall apply:

(a) As to an invention made by a Participant in the performance of research and development work that is funded in whole or in part by NASA under a JSR Agreement, and the Participant is a nonprofit organization or a small business firm, Participant has first option to elect title, file for, and maintain patents thereon, as provided for in 35 U.S.C. §200 *et seq.* Participant's rights are subject to certain license rights and other reservations of NASA, including the right to acquire title to any invention if the Participant does not exercise its option, or does not file for and maintain patents thereon, as also provided for in 35 U.S.C. §200 *et seq.*

(b) As to an invention made by a Participant in the performance of research and development work that is specifically identified and agreed to be performed by that Participant under the JSR Agreement but not funded in whole or in part by NASA, such Participant retains all right, title, and interest to the invention, and unless NASA and such Participant agree otherwise in the JSR Agreement, agrees to grant to NASA a worldwide, nonexclusive, irrevocable, paid-up license for the practice of the invention by or on behalf of the Government. As to inventions made at private expense and not in the performance of research and development work that has been specifically identified and agreed to be performed by a Participant under the JSR Agreement, NASA receives no rights whatsoever under a JSR Agreement, unless Participant and NASA agree otherwise in the JSR Agreement.

(c) As to an invention made by a NASA employee in performing an assigned task under a JSR Agreement, if NASA has the right to acquire title under applicable regulations, NASA will agree to grant the Participant for whom the task is performed, as identified in the JSR Agreement, the first option to acquire an exclusive, royalty-bearing, revocable license for each patent application filed and patent issuing thereon, subject to a worldwide, nonexclusive, irrevocable, paid-up license to practice the invention by or on behalf of the Government. Terms and conditions, including royalties and agreements on the filing and prosecution of the patent applications, will be expeditiously negotiated upon timely notification by Participant of an intent to exercise the option.

(d) NASA also agrees, with respect to any NASA-owned inventions made prior to or outside of any agreed-to tasks under a JSR Agreement that are available for licensing and bear a direct relationship to the commercialization of technology resulting from a JSR Agreement, to expeditiously consider and process any license applications timely made by a Participant either prior to execution of, or during the performance of, a JSR

Agreement. NASA licensing determinations will take into consideration the objectives set forth in Paragraph 7.0 of this Agreement.

(e) As to any invention made jointly by NASA and a Participant in performing research and development work under a JSR Agreement and for which the Participant wishes to file for and prosecute patent applications, NASA will, upon request and to the extent authorized by law, either grant an exclusive license (or may assign its rights), to the Participants, or will refrain from exercising its undivided interest in the invention in a manner inconsistent with the Participant's commercialization of the invention. All such actions will be subject to a worldwide, nonexclusive, irrevocable, paid-up license for the practice of the invention by or on behalf of the Government, and other reservations authorized or required by law.

1.02 With respect to rights to data (including technical data and computer software) resulting from, or which may be introduced into a JSR Agreement, the following shall apply:

(a) Each Participant may retain exclusive commercial rights (either as proprietary under disclosure and use prohibitions for an agreed period and/or under copyright) to all data first produced in the performance of research and development work under a JSR Agreement if funded in whole or in part by NASA or if specifically identified and agreed to be performed by a Participant, except for certain identified data of a general nature or not of a proprietary nature, or for specifically identified technical data and computer software for which it is agreed otherwise in the JSR Agreement. NASA may use, duplicate, and disclose any data for which a Participant retains exclusive commercial rights for Government purposes (including disclosure outside the Government for such purposes), under appropriate protective conditions consistent with Participant's exclusive commercial rights. Data first produced in the performance of research and development work under a JSR Agreement for which a Participant does not retain exclusive commercial rights may be obtained by NASA without restriction on disclosure and use.

(b) NASA normally will not obtain delivery of, or any rights to data proprietary to a Participant that has been produced at private expense and not in the performance research and development work that has been specifically identified and agreed to be performed by a Participant under a JSR Agreement. To the extent delivery to NASA of such data may be required, it will be under appropriate protective conditions as to its use, duplication and disclosure, and with express agreement that NASA will not use the data for manufacture or procurement purposes, and will not disclose the data outside the Government except for limited Government purposes and subject to the same limitations and protective conditions. Further, the use, duplication, and disclosure of delivered computer software developed at private expense and not in the performance of specifically identified and agreed to research and development work under a JSR Agreement will be computer limited or site limited.

(c) As to data produced by NASA in the performance of agreed-to research and development work with a Participant under a JSR Agreement, such data will be expeditiously made available to such Participant. NASA may use, duplicate, and disclose such data for Government purposes, and will endeavor, to the extent permitted by law, to prevent disclosure, duplication, and use for any other purpose, consistent with any exclusive commercial rights Participant may have retained for the same technology to which the data pertains.

1.03 Where there are multiple Participants under a JSR Agreement, the foregoing allocation of intellectual property rights are between NASA and the identified Participant whose research and development work is to be funded in whole or in part by NASA, or between NASA and an identified Participant who has agreed to such allocation of rights, as set forth in the JSR Agreement. Participants may allocate such intellectual property rights among themselves, and with others as long as such allocation is consistent with the rights and reservations of NASA and the Government, or as may be required by law.